Introduction

Vascular malformations accounting for approximately 7% of all benign tumors, the majority was developing in the head and neck region [1]. Vascular malformations are subdivided into high flow and low flow malformations, the later involve the venous malformations. The overall incidence of venous malformations is about one in 10000. These lesions commonly occur in the head and neck with a predilection for the oral cavity, airway and muscle groups. These lesions will continue to grow throughout the patient's life [2]. Venous malformations (VMs) morphologically and histologically similar to veins. They are classified as superficial or deep and as localized, multicentric or diffuse. The skin or mucosa that covers such malformations varies in color according to the depth and degree of ectasia of the lesion. The most superficial ones are purple in color, whereas the deeper ones appear more bluish greenish or may not even be visible [3]. Generally, vascular malformations in the maxillofacial region represent an aesthetic problem. Nevertheless, tongue lesions in the majority of cases can cause clinical problems like spontaneous hemorrhage from the mouth; progressive asymmetric growth of the tongue (macroglossia) can be also observed [1].

Case Report

- A 28 years old Sudanese female came to oral and maxillofacial surgery clinic complaining from painless soft swelling in the right side of the tongue presented at birth and increasing gradually in size coinciding with her age.
- No significant medical or social history.
- Clinical examinations show a non-tender warm soft compressible dome shaped tongue swelling with intact and normal colored mucosa. No apparent discharge and thrills or bruits (Figure 1).
- On aspiration biopsy, there is a blood.
- Patient was treated by regular injections of hot normal saline as sclerotic agent and showed gradual regression and solidification of the swelling (Figure 2).
Discussion

Venous malformations are common vascular malformations, in the head and neck region it accounts 40% approximately [4]. Present at birth and slowly growing during childhood, and may enlarge during trauma, puberty, and pregnancy; due to the hormonal changes and composed of an abnormal collection of veins, which are thin-walled, sponge-like channels of variable size, lacking in smooth muscle. In general it bluish compressible mass and tend to slowly expand with time [5-7]. Vascular malformations can be classified as: congenital: occurring as a result of lack of differentiation of arteries, capillaries, and veins during vascular development, and acquired, associated with previous history of injury/trauma.

In the oral cavity, it can present at any site, but most commonly on anterior two-thirds of tongue, leading to macroglossia and difficulty in mastication, speech, and deglutition. Other sites that may be involved are palate, gingiva, and buccal mucosa [8]. The diagnosis of vascular malformations is based on the patient’s medical history and a physical examination [9]. Vascular low flow lesions have progressive increase with age, trauma, and after partial resection. We believe that our case corresponds to vascular low flow malformation due to their bluish-purple aspect, consistence, and the absence of vascular pulsation [10]. Venous malformations can be managed by observation, irradiation, electro coagulation, cry therapy, low-dose aspirin, sclera therapy, surgical excision, or combinations [11-13]. Sclera therapy is commonly the preferred treatment method for venous malformations [14]. Various agents for sclera therapy; OK-432, ethanol, bleomycin, doxycycline, sodium tetradeaclyl sulfate, and hypertonic saline, alone or in combination [15]. The best-known sclerosant in the United States was hypertonic saline sodium chloride 23.4%. It was nonspecific in cellular destruction it causes dehydration to endothelial cells and red blood cells. Patients preferred “saline injections,” which has become synonymous with injection sclera therapy. The drug was readily available, lacks allergenicity, and was inexpensive [16,17]. Boiling water and warm hypertonic saline solutions have been variously used by Obuekw et al. [18] and Oji et al. [19] in treating venous malformations. They act by releasing heat energy that destroys the anomalous vascular tissues. More than boiling water, boiling saline retains heat energy which can adversely affect the vascular endothelial tissues which lead to necrosis and obliteration of the vessels’ Lumina, which regularly promotes coagulation of blood and death of the vessels [20]. The potential complications of sclera therapy include mucosal ulcerations, swelling, infection, transient nerve palsy, blood loss, and anaphylaxis [15,16]. In the current case study, using the hypertonic hot saline was very effective and a safe method as the lesion responds considerably and shrink in size without complications.

Conclusion

Venous malformations of the tongue may associated with several complications, proper diagnosis and case selection are a must to for the management and conservative treatment is preferred, in this case sclera therapy with hot saline is a safe and effective method for treating venous malformations in the oral region.
References


